DEPARTMENT of ENVIRONMENTAL SERVICES
Water Supply & Pollution Control Division - Biology Bureau

LAKE TROPHIC DATA

MORPHOMETRIC:

Lake:	BAKER POND	Lake Area (ha):	5.75
Town:	CHESTERFIELD	Maximum depth (m):	7.1
County:	Cheshire	Mean depth (m):	2.2
River Basin:	Connecticut	Volume (m^3):	124500
Latitude:	42°51'08" N	Relative depth:	2.6
Longitude:	72°27'59" W	Shore configuration:	1.18
Elevation (ft):	1130	Areal water load (m/yr):	15.28
Shore length (m):	1000	Flushing rate (yr^{-1}):	7.10
Watershed area (ha):	173.5	P retention coeff.:	0.50
% watershed ponded:	0.0	Lake type:	natural

BIOLOGICAL:		9 March 1994	30 August 1993
DOM. PHYTOPLANKTON (% TOTAL)	#1	DINOBRYON 35%	DINOBRYON 99%
	#2	TINY PENNATE DIATOMS 30%	
	#3	(ALL ALGAE SPARSE)	
PHYTOPLANKTON ABUNDANCE (cells/mL)			570
CHLOROPHYLL-A (µg/L)			7.55
DOM. ZOOPLANKTON (% TOTAL)	#1	SPARSE ZOOPLANKTON --	NAUPLIUS LARVA 64%
	#2	ONLY TWO DAPHNIA	
	#3	OBSERVED	
ROTIFERS/LITER		<1	8
MICROCRUSTACEA/LITER		2	47
ZOOPLANKTON ABUNDANCE (#/L)		2	55
VASCULAR PLANT ABUNDANCE			Sparse
SECCHI DISK TRANSPARENCY (m)			3.5
BOTTOM DISSOLVED OXYGEN (mg/L)		6.0	0.4
BACTERIA (E. coli, #/100 ml)	#1		
	#2		
	#3		

SUMMER THERMAL STRATIFICATION:

weakly stratified

Depth of thermocline (m): None
Hypolimnion volume (m^3) : None
Anoxic volume (m^3) : 350

CHEMICAL:

Lake: BAKER POND
Town: CHESTERFIELD

	9 March 1994		30 August 1993		
DEPTH (m)	2.0	5.5	2.5		5.0
pH (units)	4.9	5.1	5.2		5.3
A.N.C. (Alkalinity)	0.2	0.7	0.0		0.1
NITRATE NITROGEN	0.08	0.07	< 0.02		< 0.02
TOTAL KJELDAHL NITROGEN	0.63	0.71	0.47		0.50
TOTAL PHOSPHORUS	0.002	0.006	0.017		0.011
CONDUCTIVITY (µmhos/cm)	28.4	27.9	23.1		23.5
APPARENT COLOR (cpu)	11	17	10		12
MAGNESIUM			0.29		
CALCIUM			1.0		
SODIUM			1.2		
POTASSIUM			< 0.40		
CHLORIDE	< 2	< 2	< 3		< 3
SULFATE	7	7	6		6
TN : TP	355	130	28		45
CALCITE SATURATION INDEX					

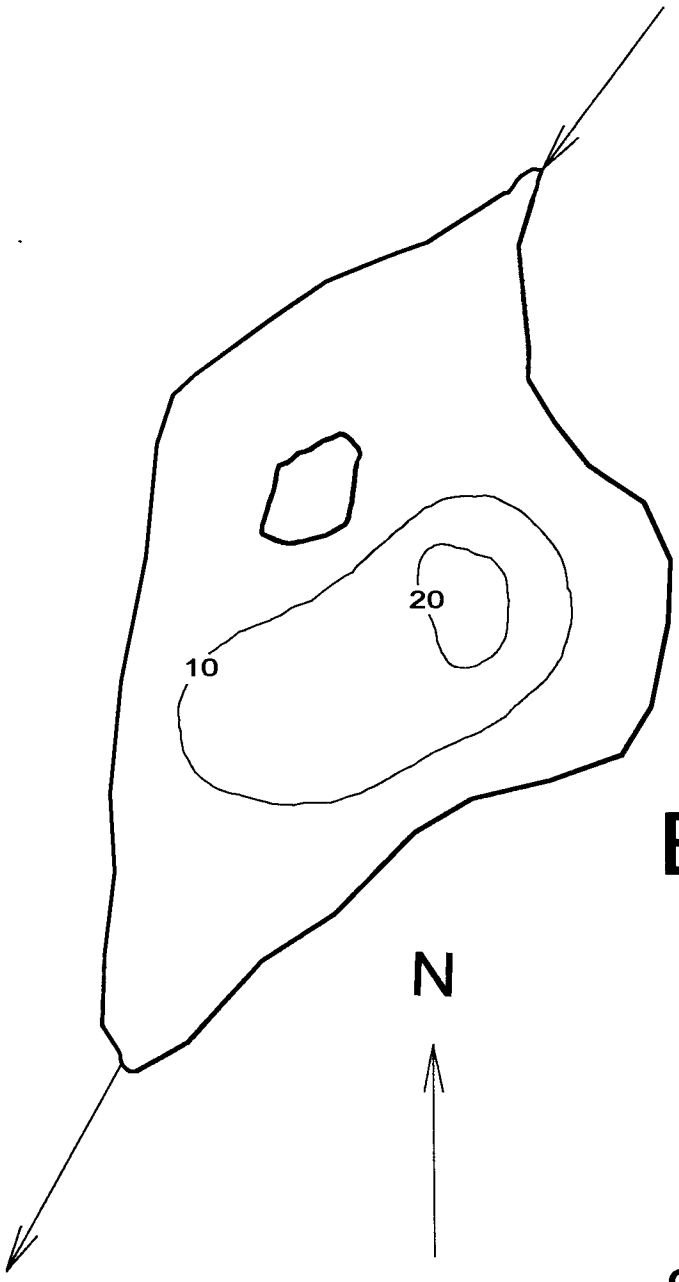
All results in mg/L unless indicated otherwise

TROPHIC CLASSIFICATION: 1993

D.O.	S.D.	PLANT	CHL	TOTAL	CLASS
**	2	0	1	3	Oligo.

COMMENTS:

1. Also known as Baker-Hubbard Pond.
2. This is a remote pond located within Pisgah State Park, an undeveloped, wilderness park. It was sampled cooperatively with the NH Fish and Game Department.
3. This is a non-colored acid pond with very low buffering capacity (A.N.C.).
4. The dominant genera of wholewater phytoplankton were Dinobryon (60%), Cryptomonas (20%) and Mallomonas (15%).



Baker Pond
Chesterfield

N

10 foot depth contours

0 0.1

Km

FIELD DATA SHEET

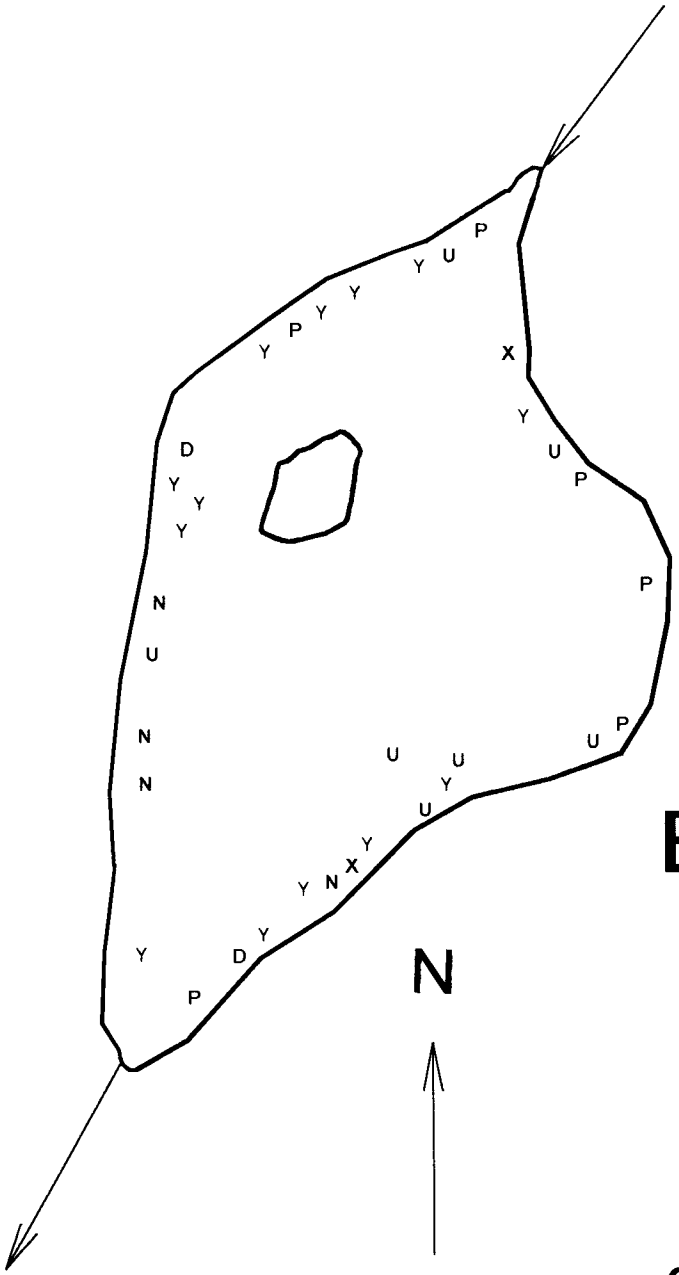
LAKE: BAKER POND
TOWN: CHESTERFIELD
DATE: 08/30/93
WEATHER: SUNNY, WARM

	DEPTH (M)	TEMP (°C)	*DISSOLVED OXYGEN	OXYGEN SATURATION
	0.5	25.5	8.1	98 %
	1.0	25.0	8.0	97 %
	2.0	25.0	8.0	97 %
	3.0	24.5	7.7	90 %
	4.0	23.5	5.6	65 %
	5.0	23.0	3.8	44 %
	6.0	22.5	1.4	16 %
	6.5	22.5	0.4	5 %

SECCHI DISK (m): 3.5
BOTTOM DEPTH (m): 7.1
TIME: 1145

COMMENTS:

*Dissolved oxygen values are in mg/L



Baker Pond
Chesterfield

0 0.1

Km

AQUATIC PLANT SURVEY

LAKE: BAKER POND TOWN: CHESTERFIELD DATE: 08/30/93

Key	PLANT NAME		ABUNDANCE
	GENERIC	COMMON	
N	Nymphaea	White water lily	Sparse
U	Utricularia	Bladderwort	Sparse
P	Pontederia cordata	Pickerelweed	Sparse
Y	Nuphar	Yellow water lily	Sparse
d	Dulichium arundinaceum	Three-way sedge	Sparse
X		Sterile thread-like leaf	Sparse

OVERALL ABUNDANCE: Sparse

GENERAL OBSERVATIONS:

1. Pond was surrounded by leatherleaf, and leatherleaf was present on boggy islands. Because the leatherleaf was not actually in the water, it is not depicted on the map.